Third West air monitor results and implentation plan update.
Shepherd, Michael
to:
Craig Bamitz (cbamitz@utah.gov), Joyce Ackerman
08/26/2011 03:57 PM
Cc:
"Clegg, Benjamin M."
Hide Details
From: "Shepherd, Michael" <Michael.Shepherd@PacifiCorp.com>

To: "Craig Bamitz (cbamitz@utah.gov)" <cbamitz@utah.gov>, Joyce Ackerman/R8/USEPA/US@EPA

Cc: "Clegg, Benjamin M." <Benjamin.Clegg@PacifiCorp.com>

5 Attachments

218343-1.pdf 218701-1.pdf 218789-1.pdf 219017-1.pdf Third West Contractor Implemenation Plan .pdf

Craig and Joyce,

Attached are the results from the air monitors we have collected to date. I suggest we provide these reports to you on a weekly basis. If a report comes back positive we will notify you immediately.

I also updated the Implementation Plan to include both of you in the second paragraph of the introduction,

"The means and methods below were created based on available information and known site conditions. If site conditions change, means and methods will be immediately communicated to Joyce Ackerman and Craig Bamitz prior to implementation."

Let me know if you have any questions or concerns.

Thanks,

Mike Shepherd

Project Manager
Rocky Mountain Power - Major Projects
801.220.4584 Office
801.631.1310 Cell
801.220.2797 Fax
michael.shepherd@pacificorp.com

REI LAB Reservoirs Environmentol, Inc.

August 9, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 218343-1
Project # / P.O. #	None Given
Project Description:	None Given

Eldon Romney
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 218343-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:	RES 218343-1
Client:	R & R Environmental
Client Project Number / P.O.:	None Given
Client Project Description:	None Given
Date Samples Received:	August 8, 2011
Analysis Type:	TEM, AHERA
Turnaround:	24 Hour
Date Samples Analyzed:	August 9, 2011

Client ID Number	Lab ID Number	Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-080411-E	EM 777390	0.0880	956	ND	0.0046	BAS	BAS
3W-080411-W	EM 777391	0.0880	946	ND	0.0046	BAS	BAS
3W-080411-N	EM 777392	0.0880	952	ND	0.0046	BAS	BAS
3W-080511-E	EM 777393	0.0880	944	ND	0.0046	BAS	BAS
3W-080511-N	EM 777394	0.0880	988	ND	0.0044	BAS	BAS
3W-080511-S	EM 777395	0.0880	960	ND	0.0046	BAS	BAS
3W-080511-W	EM 777396	0.0880	958	ND	0.0046	BAS	BAS
Blank (Sample Not Labeled)	EM 777397	NA	0	NA	----	----	----
Blank (Sample Not Labeled)	EM 777398	NA	0	NA	----	----	----

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Vattraine
Date: 2011.08.09 11:51:29 -06'00'

DATA QA

Due Date: 8-9-11
Due Time: 9am

RES 218343

REI LAB Reservoirs Environmental, Inc.
5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free :866 RESI-ENV
Pager : 5M-505-3888

Page 1 of 1

INVOICE TO: (IF DIFFERENT) CONTACT INFORMATION:

Company: RER Environmental	Company:	Contact: Dave Roskelley	Contact: Justin Korgis
Address: 47 W 9000 S.	Address	Phone: 801 541-1035	Phone: 801 828-5219
Sandy, Ut. 84070		Fax:	Fax:
		Cell/pager:	Cell/pager:
Project Number and/or P.O. #:		Final Data Deliverable Email Address: dave@rrenviro.com	
Project Description/Location:			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm
M.M / PCM / (TEM) ___ RUSH (Same Day) X PRIORITY (Next Day) ___ STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 6pm
Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-5 Day
RCRA 8 / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 5 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm
E.coli O157:H7, Coliform, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS: PLM - Short report, Long report, Point Count; TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps; PCM - 7400A, 7400B, OSHA; DUST - Total, Respirable; METALS - Analyte(s); RCRA 8, TCLP, Welding Fume, Metals Scan; ORGANICS - METH; MICROBIOLOGY: Salmonella +/-, E.coli O157:H7 +/-, Listeria +/-, Aerobic Plate Count +/- or Quantification, E.coli +/- or Quantification, Coliforms +/- or Quantification, S.aureus +/- or Quantification, Y & M +/- or Quantification, Mold +/-, Identification, Quantification; SAMPLER'S INITIALS OR OTHER NOTES

VALID MATRIX CODES: Air = A, Bulk = B, Dust = D, Paint = P, Soil = S, Wipe = W, Swab = SW, F = Food, Drinking Water = DW, Waste Water = WW, O = Other
ASTM E1792 approved wipe media only

LAB NOTES:

#	Client sample ID number (Sample ID's must be unique)	TEM	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1	3W-080411-E	↓	956	A		8/4/11		777390
2	3W-080411-W		946			8/4/11		91
3	3W-080411-N		952			8/4/11		92
4	3W-080511-E		944			8/5/11		93
5	3W-080511-N		988			"		94
6	3W-080511-S		960			"		95
7	3W-080511-W	↓	958	↓		"		96
8	Blank 7 Samples not labeled							97
9	Blank							777398
10								

Number of samples received: 9 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: Justin Korgis - Fed-Ex	Date/Time: 8/5/11	Sample Condition: On Ice / Sealed / Intact	
Laboratory Use Only Received By:	Date/Time: 8/8/11 @ 9am	Carrier: FedEx	Temp. (F°) ___ Yes / No Yes / No (Yes) / No
Results: Contact Dave (Phone) Email Fax — Date 8/9/11 Time 11:45a Initials	Contact Phone Email Fax — Date Time Initials		
Contact Phone Email Fax — Date Time Initials	Contact Phone Email Fax — Date Time Initials		

message

7-2011_version 1

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

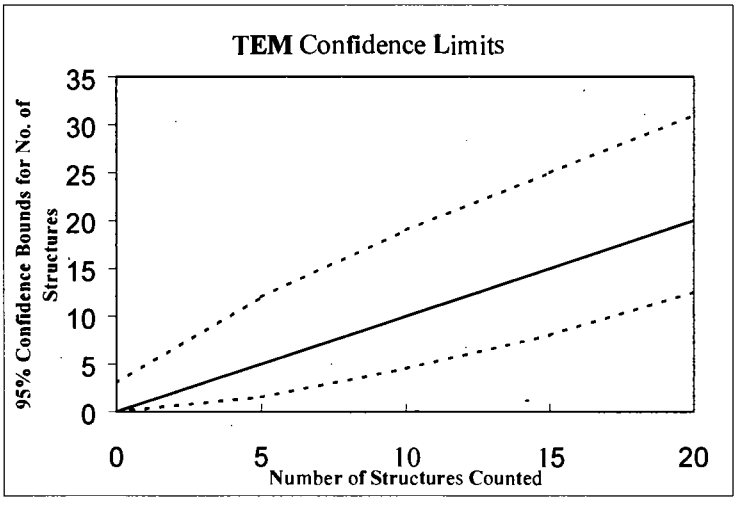
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr	Paul D. LoScalzo
Nathan DelHierro	Mark Steiner
Angela Heitger	Norberto Zimbleman
Jonathan Bernard	Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	956
Date received by lab	8/8/11
Lab Job Number:	218343
Lab Samole Number:	777390

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Rasuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/9/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	L4-4	ND												
	K4-4	ND									Prep A 90% in fmt 3-5Zo debris			
	I14-4	ND									Prep B ~ A			
	G4-4	ND												
B	H3-6	ND												
	G3-6	ND												
	F3-6	ND												
	E3-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos *Structure* Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	946
Date received by lab	8/8/11
Lab Job Number:	218343
Lab Samole Number:	777391

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/9/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	L4-6	ND												
	K4-6	ND												
	H4-6	ND												
	G4-6	ND					Pop A+B	~80% on/nut			3-5% debris			
	F4-6	ND												
B	G5-3	ND												
	F5-3	ND												
	E5-3	ND												

8/9/11

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instmment	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	952
Date received by tab	8/8/11
Lab Job Number:	218343
Lab Sample Number:	777392

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JTB
Analysis date	8/9/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H5-4	ND												
	G5-4	ND					Prep A	8.5% intact			5-7% debris			
	F5-4	ND					Prep B ~ A							
	E5-4	ND						Blank 8/9/11						
B	K4-4	ND												
	H4-4	ND												
	G4-4	ND												
	F4-4	ND												

Rsv 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	944
Data received by lab	8/8/11
Lab Job Number:	218343
Lab Sample Number:	777393

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/9/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-4	NO												
	F4-4	NO					Pop A			90% in tact	3-5% debris			
	E4-4	NO					Pop B			90 % in tact	3-5 % debris			
	C4-4	NO												
B	H4-6	NO												
	G4-6	NO												
	F4-6	NO												
	E4-6	NO												

8/9/11

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	948
Date received by lab	8/8/11
Lab Job Number:	218343
Lab Sample Number:	777394

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/9/11
Method (D=Direct, I=Indirect, tA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AHT
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K5-1	ND												
	H5-1	ND			Prep A			70% Constant		3-5% debris				
	G5-4	ND			Prep B			90% Constant		3-5% debris				
	G5-1	ND												
B	H3-6	ND									8/9/11			
	G3-6	ND												
	F3-6	ND												
	E3-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL t00 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Typa (A=Air, D=Dust):	A
Air volume (L) or dust araa (cm2)	960
Date received by lab	8/8/11
Lab Job Number:	218343
Lab Sampia Number:	777395

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis dale	8/9/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G5-4	ND												
	F5-4	ND			Prep	A		60% content			3-5% debris			
	E5-4	ND			Prep	B		90% content			3-5% debris			
	C5-4	ND												
B	H4-6	ND									8/9/11			
	G4-6	ND												
	F4-6	ND												
	E4-6	ND												

Rsv 3-2009

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Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	958
Date received by lab	8/8/11
Lab Job Number:	218343
Lab Sample Number:	777390

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/9/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AHT
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-4	NO												
	F4-4	NO					Prep A	80% intact			3-5% debris			
	E4-4	NO					Prep B	80% intact			3-5% debris			
	C4-4	NO												
B	H4-3	NO												
	G4-3	NO												
	F4-3	NO												
	E4-3	NO												

8/9/11

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50^{th} structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, } mm^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area } (mm^2)}{\text{Average GO area } (mm^2)} \times \frac{1L}{1000cc}$$

$$\text{Filter loading, s/mm2} = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed } (mm^2)}$$

GO = TEM grid opening

File: Shared on server T/Offforms.sg/AHERA Procedures
Revised: 02/27/02

REI LAB Reservoirs Environmentol, Inc.

August 17, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 218701-1
Project # / P.O. #	None Given
Project Description:	Pacificorp 3rd West Sub-Station Backgrounds

Eldon Romney
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 218701-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 218701-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: Pacificorp 3rd West Sub-Station Backgrounds
Date Samples Received: August 12, 2011
Analysis Type: TEM, AHERA
Turnaround: 3-5 Day
Date Samples Analyzed: August 16, 2011 - August 17, 2011

Client ID Number	Lab ID Number		Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W080811-N	EM	780495	0.0770	1020	ND	0.0049	BAS	BAS
3W080811-E	EM	780496	0.0770	1024	ND	0.0049	BAS	BAS
3W080811-W	EM	780497	0.0770	1020	ND	0.0049	BAS	BAS
3W080911-S	EM	780498	0.0990	844	ND	0.0046	BAS	BAS
3W080911-W	EM	780499	0.0990	844	ND	0.0046	BAS	BAS
3W080911-N	EM	780500	0.0990	842	ND	0.0046	BAS	BAS
3W080911-E	EM	780501	0.0990	846	ND	0.0046	BAS	BAS
3W081011-N	EM	780502	0.0880	912	ND	0.0048	BAS	BAS
3W081011-E	EM	780503	0.0880	912	ND	0.0048	BAS	BAS
3W081011-S	EM	780504	0.0880	914	ND	0.0048	BAS	BAS
3W081011-W	EM	780505	0.0880	914	ND	0.0048	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Vetraino
Date: 2011.08.17 16:04:24 -06'00'

DATA QA

Due Date: 8/17 - 8/19
Due Time: 8:45a

RES 218701

Reservoirs Environmental, Inc.

5601 Logan St. Denver, CO 80216 • Ph: 303 664-1666 • Fax 303-477-4275 • Toll Free :866 RESI-ENV
Pager : 303-509-2098

Page 1 of 2

INVOICE TO: (IF DIFFERENT)

Company:	R&R Environmental
Address:	49 W 9000 S Sandy Ut. 84070
Company	
Address:	
Project Number and/or P.O. #:	
Project Description/Location:	Pacificorp 3rd West Sub-station Backgrounds

CONTACT INFORMATION:

Contact:	Dave Roskelley
Phone:	801 541-1035
Fax:	
Cell/ pager:	
Contact:	Justin Kargis
Phone:	801 828-5219
Fax:	
Cell/pager:	
Final Data Deliverable Email Address:	dave@rrenviro.com, justin@rrenviro.com

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm

PLM / PCM / TEM — ___ RUSH (Same Day) ___ PRIORITY (Next Day) X STANDARD
(Rush PCM = 4hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 8pm

Metal(s) / Dust	___ RUSH ___ 24 hr. ___3-5 Day	
RCRA 8 / Metals & Welding Fume Scan / TCLP	___ RUSH ___ 5 day ___10 day	**Prior notification is required for RUSH turnarounds.**
Organics	___ 24 hr. ___ 3 day ___ 5 Day	

MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 6pm

E coli O157:H7, Coliforms, S.aureus	___ 24 hr. ___2 Day ___3-5 Day
Salmonella, Listeria, E coli, APC, Y & M	___ 48 Hr. ___3-5 Day
Mold	___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for after hours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	MICROBIOLOGY: E.coli O157:H7: +/-	MICROBIOLOGY: Listeria: +/-	MICROBIOLOGY: Aerobic Plate Count: +/- or Quantification	MICROBIOLOGY: E.coli: +/- or Quantification	MICROBIOLOGY: Coliforms: +/- or Quantification	MICROBIOLOGY: S.aureus: +/- or Quantification	MICROBIOLOGY: Y & M: +/- or Quantification	MICROBIOLOGY: Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1	3W080811-N	X																	1,020	A		8/08/11		780495
2	3W 080811-E																		1,024					96
3	3W 080811-W																		1,020					97
4	3W 080911-S																		844			8/09/11		98
5	3W 080911-W																		844					99
6	3W 080911-N																		842					780500
7	3W 080911-E																		846					01
8	3W 081011-N																		912			8/10/11		02
9	3W 081011-E																		912					03
10	3W 081011-S																		914					04

Number of samples received: 11 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: Justin Kargis Fed-Ex Date/Time: 8/10/11

Laboratory Use Only
Received By: BS Date/Time: 8/12/11 8:45a Carrier: Fed Ex

Sample Condition: On Ice: Yes / No — Sealed: Yes / No — Intact: (Yes) / No
Temp. (°): ____

Results:

	Contact	Phone	Email	Fax	Date	Time	Initials
	Dave	(Phone)	Email	Fax	8/17	1:00p	
	Contact	Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials

7950 6928 9366

7-2011_version 1

Due Date:_____
Due Time:_____

Reservoirs Environmental, Inc.

3801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4279 • Toll Free :866 RESI-ENV
Pager : 303-909-2098

Job # 218701
Page #2 of 2

INVOICE TO: (IF DIFFERENT)

Company:	Company:
Address:	Address:
Project Number and/or P.O. #:	
Project Description/Location:	

CONTACT INFORMATION:

Contact:	Contact:
Phone:	Phone:
Fax:	Fax:
Cell/pager:	Cell/pager:
Final Data Deliverable Email Address:	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm

PLM / PCM / TEM ____ RUSH (Same Day) ___ PRIORITY (Next Day) ___STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm

Metal(s) / Dust ___ RUSH ___ 24 hr. ___3-5 Day
RCRA 8 / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 6 day ___10 day
Organics ___ 24 hr. ___ 3 day ___5 Day

Prior notification is required for RUSH turnaround.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 6pm

E.coli O157:H7, Coliforms, S aureus ___ 24 hr. ___2 Day ___3-5 Day
Salmonella, Listeria, E coli, APC, Y & M ___ 48 Hr. ___3-5 Day
Mold ___ RUSH ___24 Hr ___48 Hr ___3 Day ___5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS

Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	MICROBIOLOGY: E.coli O157:H7: +/-	MICROBIOLOGY: Listeria: +/-	MICROBIOLOGY: Aerobic Plate Count: +/- or Quantification	MICROBIOLOGY: E.coli: +/- or Quantification	MICROBIOLOGY: Coliforms: +/- or Quantification	MICROBIOLOGY: S.aureus: +/- or Quantification	MICROBIOLOGY: Y & M: +/- or Quantification	MICROBIOLOGY: Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1 SW 081011-W		X																	914	A		8/10/11		780505
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

LAB NOTES:

Number of samples received: 1 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: Date/Time:

Laboratory Use Only
Received By: Date/Time: 8/12/11 8:45a Carrier: Fed Ex

Sample Condition: On Ice Yes / No Sealed Yes / No Intact Yes / No
Temp. (F°) _____

Results:	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

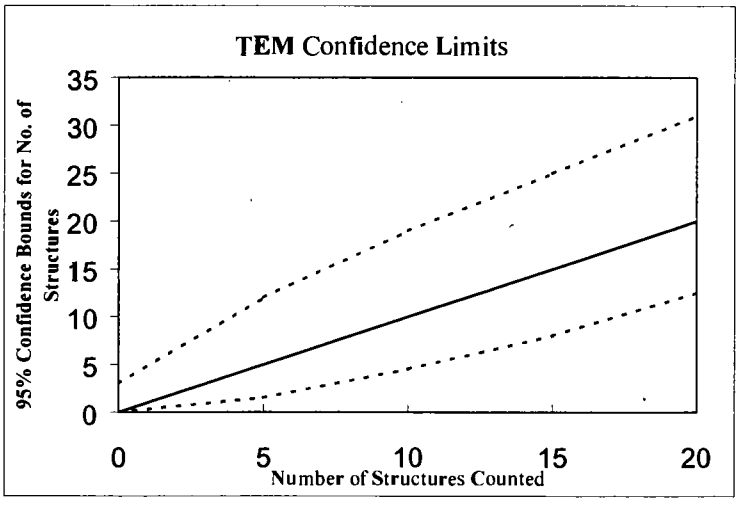
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
Angela Heitger
Jonathan Bernard
Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dusi):	A
Air volume (L) or dust area (cm2)	1020
Date received by lab	8/12/11
Lab Job Number:	218701
Lab Sample Number:	780495

F-Factor Calculation (indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AK/JB
Analysis date	8/16/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	D	NAM		Sketch	Photo	EOS
A	C3-6	ND												
	E3-6	ND												
	E3-4	ND												
	C5-1	ND												
	E5-1	ND												
B	C5-4	ND												
	E5-3	ND												
							Prep A	70% intact 3-5% debris						
							B	70% intact 3-5% debris						

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instmment	JEOL 100 (N) S
Voltane (KV)	100 KV
Magnification	(20)10(10)KX
Grid opening atea (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mn2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Oust):	A
Air volume (L) or dust area (cm2)	1024
Date received by lab	8/12/11
Lab Job Number:	248701
Lab Sample Number:	780496

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	TK/SB
Analysis date	8/16/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	C4-3	ND												
	E4-3	ND												
	F4-3	ND												
	F4-1	ND												
B	G5-4	ND												
	H4-1	ND												
	K3-3	ND												
							Prep A	60% in bkgd		3-5% debris				
							B	70% in bkgd		35% debris				

Rev 3-2009

LA = Libby-type amphibole QA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1020
Date received by lab	8/12/11
Lab Job Number:	218701
Lab Sample Number:	780497

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB/JB
Analysis date	8/16/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K5-4	ND												
	H5-4	ND												
	G5-4	ND												
	F5-4	ND												
B	K3-3	ND												
	H3-3	ND												
	G3-3	ND												
							Prep A 70% content 3-5% debris							
							B 80% content 3-5% debris							

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.

TEM Asbestos Structure Count

Laboratory name:	REI
instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX (10KX)
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	844
Date received by lab	8/12/11
Lab Job Number:	215701
Lab Sample Number:	780498

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/16/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-6	ND												
	G4-6	ND												
	F4-6	ND												
	E4-6	ND												
	C4-6	ND												
B	F5-4	ND												
	E5-4	ND												
	F5-4	ND												
	C5-4	ND					Prep A	90% in tact		1-3% debris				
							B	90% in tact		~3% debris				

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	644
Date received by lab	8/12/11
Lab Job Number:	218701
Lab Sample Number:	780 499

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/16/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H6-1	ND												
	G6-4	ND												
	G6-1	ND												
	F6-4	ND												
	F6-6	ND												
B	H3-6	ND												
	G3-6	ND												
	E3-6	ND												
	C3-6	ND					Prep A	50% in dust		3-5% debris				
							B	80% in dust		3-5% debris				

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.

TEM Asbestos Structure Count

Laboratory name:	REt
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	842
Date received by lab	8/12/11
Lab Job Number:	215701
Lab Sample Number:	780 500

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JK / JB
Analysis date	8/16/11
Method (D=Direct, I=Indirect, IA=indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H3-3	ND												
	G3-3	ND												
	F3-3	ND												
	E3-3	ND												
	E4-3	ND												
P	H4-6	ND												
	G4-6	ND												
	F4-6	ND												
	F5-3	ND					Pop A	80% int 3-5% debris						
							B	80% int 3-5% debris						

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.

TEM Asbestos Structure Count

Laboratory name:	REI
Instaiment	JEOL 100 N S
Voltage (KV)	100 KV
Magnificatkin	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Samole Tvoe (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	5416
Date received bv lab	5/12/11
Lab Job Number:	218701
Lab Samole Number:	780 501

F-Factor Calculation (Indirect Preps Only):

Fraction of ptimaty filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JTB
Analysis date	5/16/11
Method (D=Direct, I=Indirect, IA=indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Wkith		Amphibole	C	NAM		Sketch	Photo	EDS
A	K4-1	ND												
	H4-4	ND												
	H4-1	ND												
	G4-4	ND												
	G4-1	ND												
B	H4-4	ND												
	G4-4	ND												
	G5-3	ND												
	F5-3	ND					Prep A	60% in bent		3-5% debris				
							B	100% in bent		3-5% debris				

5/16/11

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	912
Date received by lab	8/12/11
Lab Job Number:	218701
Lab Sample Number:	750 502

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/17/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F3-6	ND												
	E3-6	ND												
	C3-6	ND												
	B3-6	ND												
	B5-1	ND												
B	G4-3	ND												
	F4-6	ND												
	F4-3	ND												
							Pop A	60% in bkt		3-5% debris				
							B	50% in bkt		3-5% debris				

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.

TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	942
Date received by lab	8/12/11
Lab Job Number:	248701
Lab Sample Number:	780 503

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspenskin Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	MK
Analysis date	8/17/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Struchures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	G5-4	ND												
	F5-4	ND												
	E5-4	ND												
	E4-4	ND												
B	H3-6	ND												
	G3-6	ND												
	F3-6	ND												
	F4-3	ND												
							Pop A	90% in bunt		3-5% debris				
							B	80% in bunt		3-5% debris				

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.

TEM Asbestos Structure Count

Laboratory name:	REt
Instmment	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	RoR
Sample Type (A=Air, D=Oust):	A
Air volume (L) or dust area (cm2)	914
Date received by lab	8/12/11
Lab Job Number:	218701
Lab Sample Number:	750 504

F-Factor Calculation (Indirect Preps Only):

Fractioo of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed bv	[illegible]
Analysis date	8/17/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage (ocation	Month Analyzed
Scope Alignrhent	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G5-1	ND												
	F5-1	ND												
	E5-1	ND												
	C5-1	ND												
B	F3-1	ND												
	E3-1	ND												
	C3-1	ND												
	C3-3	ND												
							Pop A	90% intact		5-10% debris				
							B	80% intact		5-10% debris				

Rev 8-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	914
Date received by lab	8/12/11
Lab Job Number:	215701
Lab Sample Number:	750 505

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/17/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Structures		Dimensions		Identificaiion	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F3-1	ND												
	E3-4	ND												
	E3-1	ND												
	E3-4	ND												
B	G3-4	ND												
	F3-4	ND												
	E3-4	ND												
	C3-4	ND												
							Pop A	60% in tact		35% debris				
							B	50% in tact		3-5% debris			8/17/11	

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber: is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.

Bundle: is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.

Cluster: is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.

Matrix: is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50^{th} structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, } mm^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area } (mm^2)}{\text{Average GO area } (mm^2)} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm2} = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed } (mm^2)}$$

GO = TEM grid opening

File: Shared on server T/Offforms.sg/AHERA Procedures
Revised: 02/27/02

REI LAB Reservoirs Environmentol, Inc.

August 19, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 218789-1
Project # / P.O. #	None Given
Project Description:	Pacificorp 3rd West Sub.

Eldon Romney
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 218789-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 218789-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: Pacificorp 3rd West Sub.
Date Samples Received: August 15, 2011
Analysis Type: TEM, AHERA
Turnaround: 3-5 Day
Date Samples Analyzed: August 19, 2011

Client ID Number	Lab ID Number	Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-081111-S	EM 781413	0.0990	880	ND	0.0044	BAS	BAS
3W-081111-N	EM 781414	0.0990	874	ND	0.0044	BAS	BAS
3W-081111-E	EM 781415	0.0990	874	ND	0.0044	BAS	BAS
3W-081111-W	EM 781416	0.0990	870	ND	0.0045	BAS	BAS
3W-081211-S	EM 781417	0.0990	880	ND	0.0044	BAS	BAS
3W-081211-W	EM 781418	0.0990	880	ND	0.0044	BAS	BAS
3W-081211-N	EM 781419	0.0990	882	ND	0.0044	BAS	BAS
3W-081211-E	EM 781420	0.0990	884	ND	0.0044	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Veltraino
Date: 2011.08.19 15:32:13 -05'00'

DATA QA

Due Date: 8/18 - 8/22
Due Time: 9:45

RES 218789

REI LAB Reservoirs Environmental, Inc.

9081 Logan St. Denver, CO 80215 • Ph: 303 964-1386 • Fax 303-477-4275 • Toll Free :866 RESI-ENV
Pager: 303-519-2098

Page 1 of 1

INVOICE TO: (IF DIFFERENT) — CONTACT INFORMATION:

Company: R & R Environmental	Company	Contact: Dave Roskelley	Contact: Justin Kargis
Address: 47 W 9000 S. Sandy, Ut. 84070	Address:	Phone: 801 541-1035	Phone: 801 828-5219
		Fax:	Fax:
		Cell/pager:	Cell/pager:
Project Number and/or P.O. #:		Final Data Deliverable Email Address: dave@rrenviro.com, justin@rrenviro.com	
Project Description/Location: Pacificorp 3rd West Sub.			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm
PLM / PCM / (TEM) ___ RUSH (Same Day) ___ PRIORITY (Next Day) X STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm
Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-5 Day
RCRA 8 / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 5 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm
E.coli O157:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS columns: PLM - Short report, Long report, Point Count; TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps; PCM - 7400A, 7400B, OSHA; DUST - Total, Respirable; METALS - Analyte(s) RCRA 8, TCLP, Welding Fume, Metals Scan; ORGANICS - METH; MICROBIOLOGY: Salmonella: +/-; E.coli O157:H7: +/-; Listeria: +/-; Aerobic Plate Count: +/- or Quantification; E.coli: +/- or Quantification; Coliforms: +/- or Quantification; S.aureus: +/- or Quantification; Y & M: +/- or Quantification; Mold: +/-, Identification, Quantification; SAMPLER'S INITIALS OR OTHER NOTES

VALID MATRIX CODES: Air = A; Bulk = B; Dust = D; Paint = P; Soil = S; Wipe = W; Swab = SW; F = Food; Drinking Water = DW; Waste Water = WW; O = Other
ASTM E1792 approved wipe media only

LAB NOTES:

#	Client sample ID number (Sample ID's must be unique)	TEM	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1	3W-081111-S	X	880	A		08/11/11		781413
2	3W-081111-N	↓	874	↓		↓		14
3	3W-081111-E	↓	874	↓		↓		15
4	3W-081111-W	↓	870	↓		↓		16
5	3W-~~081211~~ 081211-S	↓	880	↓		08/12/11		17
6	3W-081211-W	↓	880	↓		↓		18
7	3W-081211-N	↓	882	↓		↓		19
8	3W-881211-E	↓	884	↓		↓		20
9								
10								

Number of samples received: 8 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: [signature] Date/Time: 8/12/11

Laboratory Use Only Received By: [signature] Date/Time: 8/15/11 @ 9:45 Carrier: FedEx

Sample Condition: Temp. (F°) ______ On Ice Yes / No Sealed Yes / No Intact (Yes) / No

Results:	Contact		Date	Time	Initials	Contact		Date	Time	Initials
	Contact: Dan	(Phone) Email Fax	Date 8/19/11	Time 1:40p	Initials	Contact	Phone Email Fax	Date	Time	Initials
	Contact	Phone Email Fax	Date	Time	Initials	Contact	Phone Email Fax	Date	Time	Initials

Tracking #: 7950 7762 5007

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

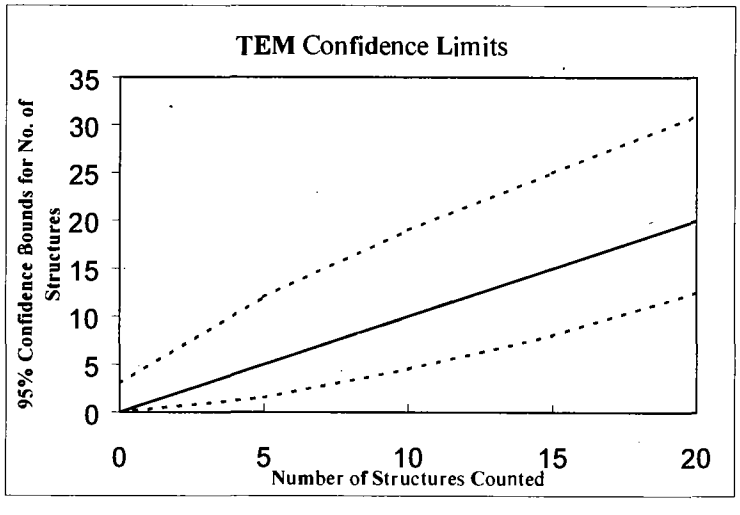
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr	Paul D. LoScalzo
Nathan DelHierro	Mark Steiner
Angela Heitger	Norberto Zimbleman
Jonathan Bernard	Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Fitter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	850
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	78414 13

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	TK/JM
Analysis date	8/19/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K5-6	ND												
	H5-6	ND												
	G4-4	ND												
	K3-1	ND												
	L5-1	ND				Prep A ~50%. MTACT 3-5%.					Debris			
B	E5-4	ND												
	C5-4	ND												
	B5-4	ND												
	B4-4	ND				Prep B~		Prep A						

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 (N) S
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	874
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	7814 14

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	TK/JB
Analysis date	8/19/11
Method (O=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G3-4	ND												
	F3-4	ND												
	E3-4	ND												
	C3-4	ND												
	C3-6	ND			Prep A		90% intact 3-5% debris							
B	F2-6	ND												
	E2-6	ND												
	K4-1	ND												
	H4-1	ND			Prep		B~A							

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Tvoe	

Client :	R&R
Sample Type (A=Air, 0=Dust):	A
Air volume (L) or dust area (cm2)	874
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	7814 15

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	TK/JD
Analysis date	8/19/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	l.ength	Wkith		Amphibole	C	NAM		Sketch	Photo	EOS
A	G4-4	ND												
	F4-4	ND												
	F4-6	ND												
	G4-6	ND												
	G5-6	ND				Prep A	80/. intact		35/. debris					
B	G3-6	ND												
	F3-6	ND												
	E3-6	ND												
	G4-6	ND				Prep	B ~50/. intact		3-5/. Debris					

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N(S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	870
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	7814 16

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/19/11
Method (D=Direct, I=Indirect, IA=Indirect, asted)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	L4-4	ND												
	I4-4	ND			Prep A		95%			3-5% debris				
	K4-4	ND			Prep B		70%			3-5% debris				
	G4-4	ND												
	F4-1	ND												
B	G6-4	ND									8/19/11			
	F6-4	ND												
	F6-1	ND												
	E6-1	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area fcm2)	880
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	78414 17

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	8/19/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	G4-4	ND												
	G4-1	ND			Prep	A	80% in tant		3-5%		debris			
	F4-4	ND			Prep	B	90% in tant		3-5%		debris			
	F4-1	ND												
	E4-4	ND												
B	K4-1	ND												
	H4-1	ND												
	G4-1	ND												
	F4-1	ND												

Rev 3-2009

LA = Libby-type amphibole QA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	880
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	7814 18

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JM
Analysis date	8/19/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scoop Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-1	ND												
	G4-1	ND												
	H4-6	ND			Prep	A	80% intact			3-5% debris				
	G4-6	ND			Prep	B	80% intact			3-5% debris				
	F4-6	ND												
B	K4-3	ND					[signature] 8/19/11							
	H4-3	ND												
	G4-3	ND												
	F4-3	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 W S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	882
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	7814 19

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JM
Analysis date	8/19/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F5-6	ND												
	E5-6	ND												
	C5-6	ND						Prep A 80% content			3-5% debris			
	G5-1	ND						Prep B ~ A						
	F5-1	ND												
B	K3-1	ND												
	H3-1	ND												
	K3-3	ND												
	H3-3	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	884
Date received by lab	8/15/11
Lab Job Number:	218789
Lab Sample Number:	78414 20

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JK
Analysis date	8/19/11
Method (D=Direct, 1=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-1	ND												
	F4-1	ND						Prep A & B 80% cont 3-5 Lo debris						
	E4-1	ND												
	C4-1	ND												
	E3-6	ND									8/19/11			
B	H4-6	ND												
	G4-6	ND												
	H3-6	ND												
	G3-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50^{th} structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, } mm^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area } (mm^2)}{\text{Average GO area } (mm^2)} \times \frac{1L}{1000cc}$$

$$\text{Filter loading, s/mm2} = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed } (mm^2)}$$

GO = TEM grid opening

REI LAB Reservoirs Environmental, Inc.

August 25, 2011

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 219017-1
Project # / P.O. #	None Given
Project Description:	3rd West Sub Station

R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 219017-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number:	RES 219017-1
Client:	R & R Environmental
Client Project Number / P.O.:	None Given
Client Project Description:	3rd West Sub Station
Date Samples Received:	August 18, 2011
Analysis Type:	TEM, AHERA
Turnaround:	3-5 Day
Date Samples Analyzed:	August 24, 2011

Client ID Number	Lab ID Number		Area Analyzed (mm^2)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm^2)
3W-081511-N	EM	782926	0.0880	960	ND	0.0046	BAS	BAS
3W-081511-E	EM	782927	0.0880	956	ND	0.0046	BAS	BAS
3W-081511-S	EM	782928	0.0880	960	ND	0.0046	BAS	BAS
3W-081511-W	EM	782929	0.0880	960	ND	0.0046	BAS	BAS
3W-081611-E	EM	782930	0.0880	928	ND	0.0047	BAS	BAS
3W-081611-N	EM	782931	0.0880	926	ND	0.0047	BAS	BAS
3W-081611-S	EM	782932	0.0880	928	ND	0.0047	BAS	BAS
3W-081611-W	EM	782933	0.0880	930	ND	0.0047	BAS	BAS

NA = Not Analyzed
ND = None Detected
BAS = Below Analytical Sensitivity
Average Grid Opening in mm^2 = 0.011

Filter Material = Mixed Cellulose Ester
Filter Diameter = 25 mm
Effective Filter Area = 385 sq mm

Digitally signed by Gina Veltrano
Date: 2011.08.25 08:40:52 -06'00'

DATA QA

RES 219017

Due Date: 823-825
Due Time: 8d5a

REI LAB Reservoirs Environmental, Inc.
5801 Logan St. Denver, CO 80216 • Ph: 303 964-1986 • Fax 303-477-4275 • Toll Free: 866 RESI-ENV
Pager: 303-509-2098

Page 1 of 1

	INVOICE TO: (IF DIFFERENT)	CONTACT INFORMATION:	
Company: RFR Environmental	Company:	Contact: Dave Roskelley	Contact: Justin Kargis
Address: 47 W 9000 S	Address:	Phone: 801 541-1035	Phone: 801 828-5219
Sandy Ut. 84070		Fax	Fax
		Cell/pager:	Cell/pager
Project Number and/or P.O. #:		Final Data Deliverable Email Address:	
Project Description/Location: 3rd West Sub Station (per Dave) JB 8/25/11		dave@rrenviro.com, justin@rrenviro.com	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm
PLM / PCM / (TEM) ___ RUSH (Same Day) ___ PRIORITY (Next Day) X STANDARD
(Rush PCM = 2hr, TEM = 6hr.)

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm
Metal(s) / Dust ___ RUSH ___ 24 hr. ___ 3-5 Day
RCRA 8 / Metals & Welding Fume Scan / TCLP ___ RUSH ___ 5 day ___ 10 day
Organics ___ 24 hr. ___ 3 day ___ 5 Day
Prior notification is required for RUSH turnarounds.

MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 6pm
E.coli O157:H7, Coliforms, S.aureus ___ 24 hr. ___ 2 Day ___ 3-5 Day
Salmonella, Listeria, E.coli, APC, Y & M ___ 48 Hr. ___ 3-5 Day
Mold ___ RUSH ___ 24 Hr ___ 48 Hr ___ 3 Day ___ 5 Day

Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.

Special Instructions:

REQUESTED ANALYSIS

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Paint = P
Soil = S	Wipe = W
Swab = SW	F = Food
Drinking Water = DW	Waste Water = WW
O = Other	

ASTM E1792 approved wipe media only

LAB NOTES:

#	Client sample ID number (Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s) RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	MICROBIOLOGY: Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Laboratory Use Only)
1	3W-081511-N		X														960→	[illegible]	A		8/15/11		782926
2	3W-081511-E		↓														956→	[illegible]	↓		↓		27
3	3W-081511-S		↓														960→	[illegible]	↓		↓		28
4	3W-081511-W		↓															960	↓		↓		29
5	3W-081611-E		↓															928	↓		8/16/11		30
6	3W-081611-N		↓															926	↓		↓		31
7	3W-081611-S		↓															928	↓		↓		32
8	3W-081611-W		↓															930	↓		↓		33
9																							
10																							

Number of samples received: 8 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: [signature] Fedex 7956 8765 4198	Date/Time:	Sample Condition:	On Ice / Sealed / Intact
Laboratory Use Only Received By: [signature]	Date/Time: 8/18/11 @ 845a	Carrier: FedEx	Temp. (F°) ___ Yes / No · Yes / No · (Yes) / No

Results:	Contact	Phone Email Fax	Date	Time	Initials	Contact	Phone Email Fax	Date	Time	Initials
	Contact	Phone Email Fax	Date	Time	Initials	Contact	Phone Email Fax	Date	Time	Initials

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type	Structure Types
A = Amosite	F = Fiber
An = Anthophyllite	B = Bundle
C = Chrysotile	C = Cluster
Cr = Crocidolite	M = Matrix
T = Tremolite	

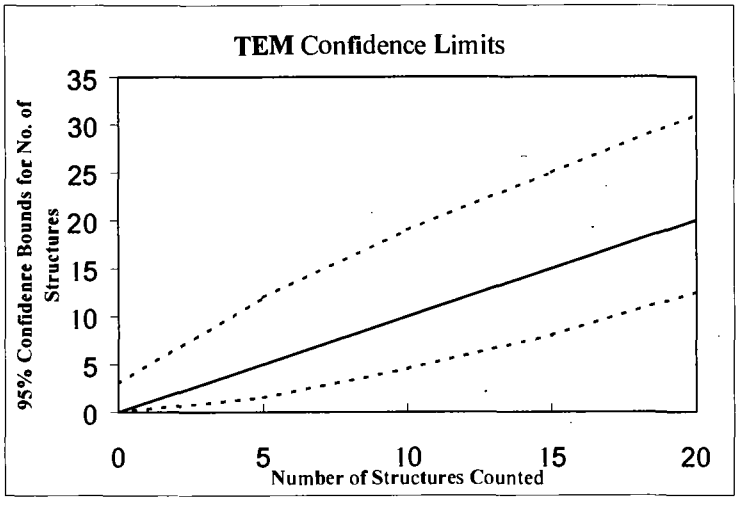
ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
Angela Heitger
Jonathan Bernard
Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	960
Date received by lab	8-18-11
Lab Job Number:	219017
Lab Sample Number:	782926

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, I=Indirect, iA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

data QA SM 8/25/11

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G6-1	ND												
	F6-4	ND												
	F6-1	ND		Prep A: 80% intact				3% debris						
	E6-4	ND		Prep B ~ Prep F										
	E6-1	ND												
B	F3-6	ND												
	F3-3	ND												
	E3-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	956
Date received by lab	8-18-11
Lab Job Number:	219017
Lab Sample Number:	782927

F-Factor Calcutation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	GS-4	ND												
	GS-1	ND												
	FS-4	ND		Prep A: 80% intact 5% debris										
	FS-1	ND		Prep B & Prep L										
B	LS-3	ND												
	KS-6	ND												
	KS-3	ND												
	HS-6	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grkl opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	960
Date received by lab	8-18-11
Lab Job Number:	219017
Lab Samole Number:	782928

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G5-3	ND												
	F5-6	ND												
	F5-3	ND		Prep A: 75% intact				3-5% debris						
	E5-6	ND		Prep B: 60% intact				3-5% debris						
B	G5-1	ND												
	G4-3	ND												
	F3-6	ND												
	F3-3	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Samole Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	960
Date received by lab	8-18-11
Lab Job Number:	219017
Lab Sample Number:	782929

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondsry filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, i=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F6-6	ND												
	F6-3	ND												
	E6-6	ND			Prep A: 60% intact 3-5% debris									
	E6-3	ND			Prep B ~ Prep A									
	C6-6	ND												
B	H4-4	ND												
	H4-1	ND												
	G4-4	ND												

Rsv 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	928
Date received by lab	8-18-11
Lab Job Number:	219017
Lab Samole Number:	782930

F-Factor Calculation (Indirect Preps Only):

Frsction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identificaiian	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-1	ND												
	G4-4	ND												
	G4-1	ND		Prep A: 90% intact				3% double bnds						
	F4-4	ND		Prep B ~ Prep A										
B	H3-6	ND												
	H3-3	ND												
	G3-6	ND												
	G3-3	ND												

Rev 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instmment	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area fcm2)	926
Date received by lab	8-18-11
Lab Job Number:	219017
Lab Sample Number:	782931

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Stmcture Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-4	ND												
	G4-1	ND												
	F4-4	ND		Prep A: 80% intact					5% debris					
	F4-1	ND		Prep B: 60% intact					5% debris					
B	F1-3	ND												
	B3-6	ND												
	B3-3	ND												
	A3-6	ND												

Rev 3-2009

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Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instmment	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	928
Date received bv lab	8-18-11
Lab Job Number:	219017
Lab Samole Number:	782932

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	8-24-11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grkf storaae location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Stmctures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	E4-6	ND												
	E4-3	ND												
	C4-6	ND		Prep	A:	90%	intact			3-5% debris				
	C4-3	ND		Prep	B:	80%	intact			3-5% debris				
B	E3-6	ND												
	E3-3	ND												
	C3-6	ND												
	C3-3	ND												

Rsv 3-2009

LA = Libby-type amphibole OA = Other (non-Libby type) amphibole C = Chrysotile NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	(20KX) 10KX
Grid opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	
QA Type	

Client :	R+R
Samole Type (A=Air, D=Dust):	A
Air volume (L) or dust araa (cm2)	930
Date received bv lab	8-18-11
Lab Job Number:	219017
Lab Sample Number:	782933

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed bv	AH
Analysis date	8-#11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	Ahera
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	C5-3	ND												
	B5-6	ND												
	B5-3	ND		Prep A: 90% intact				3-5% debris						
	A5-6	ND		Prep B: 70% intact				3-5% debris						
B	E5-4	ND												
	E5-1	ND												
	C5-4	ND												
	C5-1	ND												

Rev 9-2009

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Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm^2 (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm^2 clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \#\text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\#\text{ Asbestos Structures}}{\#\text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\#\text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening

CONTRACTOR IMPLEMENTATION PLAN OF THE THIRD WEST SUBSTATION 2011 UPGRADE PROJECT WORK PLAN JUNE 2011

Cache Valley Electric Co.

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TABLE OF CONTENTS

INTRODUCTION

This document is an implementation plan to the Third West Substation 2011 Upgrade Project Work Plan June 2011, reviewed by the Utah Department of Environmental Quality and Environmental Protection Agency. This implementation plan is intended to more fully detail the means and methods to be implemented to meet the criteria set forth by OSHA, EPA, DEQ, and any local and state requirements and to meet all criteria identified in the work plan.

The means and methods below were created based on available information and known site conditions. If site conditions change, means and methods will be immediately communicated to Joyce Ackerman and Craig Bamitz prior to implementation.

WORK ZONES AND PHASING PLAN

WORK ZONES

To facilitate construction activities and limit personnel exposure, the site will be divided into three work zones. Proposed work zones are delineated and attached as Exhibits 1, 2, and 3 following this document.

Work zones will delineate between exclusion zones and non-exclusion zones. Depending on the phase of work, each zone will carry either designation (exclusion and non-exclusion).

On-site delineation will be an exclusion zone barrier between exclusion zones and other work zones to control the movement of personnel and control the migration of contaminated material. Specific access control and entry requirement is detailed later in this document.

PHASING PLAN

PHASE I

Remove superstructures, bus, and any equipment that does not require soil disturbance. This work will occur in all three work zones. This phase will take approximately two-three weeks.

PHASE II

Zone 1

Zone 1 will be the exclusion zone during Phase II of the work (see Exhibit 1). All construction activities that will disturb the soil will be completed during this phase. This includes duct bank, footings and foundations, ground grid, conduit, and cable tray. Upon completion of this phase, the entire zone will be stabilized and no further controlled work will be required.

Zone 1 will be delineated from the other zones using fencing as detailed further in this document.

Zone 2

In parallel with work in Zone 1 excavation, footings and foundations, conduit, and ground grid will be installed in the clean fill in Zone 2. All excavations will be done in bank run that was hauled in during 2005 work. The area that was cleaned will be marked out and delineated; after delineation we will establish the clean area 10' offset to the inside to ensure that no contaminated soil will be disturbed.

Zone 3
No work disturbing soils is anticipated at this time.

This phase will take approximately four-six weeks.

PHASE III
Zone 1
This area is now stabilized. No work disturbing soils is anticipated at this time.

Zone 2
During Phase III this will now be the exclusion zone. We recognize that the majority of Zone 2 has been remediated, in a previous project. All the work in the remediated area will take place prior to disturbing any of the contaminated soils. Once this portion of Phase 2 is complete, we will begin work removing the existing foundations and placing new footings and foundations, conduits, and ground grid.

The zone will be fenced with the temporary fence and the plastic sheeting to delineate Zone 2 from the remainder of the yard. The shower house and the clean room will not move at this time however the entry and exit will change in order to move the workers from an active zone (2) to an inactive zone (1). This will allow for the ingress and egress of personnel. See Exhibit 2 for approximate control locations.

Vehicular Access to allow trucks to haul material from the exclusion zone will be from a gate installed on the East fence (see Exhibit 2) with the controls described later in this document.

Zone 3

No work disturbing soils is anticipated at this time.

This phase will take approximately four-six weeks.

PHASE IV
Zone 1

This area is now stabilized. No work disturbing soils is anticipated at this time.

Zone 2

This area is now stabilized. No work disturbing soils is anticipated at this time.

Zone 3

Fencing will be erected per the controls in this document. The clean room will be relocated to the east end of Zone #3.

Work in this area will include the foundation removal and the installation of the new foundation, building removal and all the grounding, conduit and the necessary grading to finish the sub and stabilize the soils.

This phase will take approximately four-six weeks.

PHASE V

Entire site is stabilized. No soil disturbing work remains. Air monitors, dust control, and SWPPP will continue until work is complete. Fence with plastic sheeting and steel plate access will be removed.

Zone 1

This area is now stabilized. No work disturbing soils is anticipated at this time.

Zone 2

This area is now stabilized. No work disturbing soils is anticipated at this time.

Zone 3

This area is now stabilized. No work disturbing soils is anticipated at this time.

This phase will take approximately ten-twelve weeks.

CONTROLS, PROCESSES AND PROCEDURES

EXCLUSION FENCING

Fencing will be constructed using a 10 foot tall chain link fence covered with plastic sheeting. The fencing will be inspected and maintained to ensure the integrity of the plastic sheeting. The fencing will be a contiguous delineation with controlled ingress and egress for personnel and equipment.

Fencing will be relocated and reconstructed according to the phasing plan.

AIR MONITORING

Air monitors will be placed on the fence at the extents of the site work. Samples will be shipped overnight to be analyzed within 48 hours of the work. Air monitoring will be used to ensure the implemented controls are working as designed.

DUST CONTROL

Dust will be controlled by pre wetting excavation areas prior to digging. Water will also be sprayed during excavation as needed. All trucks will be washed down after being loaded over a raised ramp with a closed containment below. This truck wash out ramp is moveable and will be phased into exclusion zones as needed. An additional power washer will be onsite in the event track out needs to be mitigated.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A SWPPP will be created and filed as required under the UPDES/NPDES General Permit.

Any storm water, and all other water used in processing, will be stored on-site and treated prior to discharge. Captured solids and filters will be disposed of per the disposal procedure in this document.

CONTAMINATED SOIL DISPOSAL

MATERIAL DISPOSAL TRACKING

Material hauled from the site will be disposed at sites permitted to handle regulated material. Truck receipts will be tracked and provided to PacifiCorp's Quality Assurance Inspector on a daily basis.

INGRESS/EGRESS PROCESS AND PROCEDURE

ACCESS CONTROL

To gain entrance on-site, personnel will check into the gate personnel. Proper training credentials will be verified prior to granting entry into the work zone. To enter any part of the work zone, except by exceptions below noted, personnel will need 4-hour asbestos awareness training. Personnel who will enter the exclusion zone will take the HAZWOPER training course. Project hard hat stickers have been obtained and will be fastened onto hard-hats; non-trained individuals will be conspicuous as they will not have the stickers.

Sign-in access sheets will be maintained at the jobsite or available electronically from PacifiCorp. The sign-in sheet will include name, company, training qualifications, and work zone.

The only exceptions to the training are vendors whose involvement is ancillary to the controlled work. Examples of which are steel fabricators, concrete suppliers, sanitary facilities, emergency personnel, etc.

EXCLUSION ZONE PERSONNEL

Personnel will enter the exclusion zone via the Clean Room. Upon entry personnel will suit up in the appropriate PPE cross through the clean room into the exclusion zone.

Personnel will exit the exclusion zone via the Clean Room. Personnel will enter the clean room, wash/shower head, face, and mask, remove mask, disrobe, and shower. After a shower they will dress in regular clothes and leave the site.

EXCLUSION ZONE VEHICULAR

Truck loading areas will be created within the exclusion zones to facilitate the export of material. Steel plates will be placed on the ground from the non-exclusion zones into the exclusion zones where loading will occur. The plates will keep the tires from tracking any controlled material.

Truck beds will be lined with plastic sheeting prior to loading material. Material will be placed atop the plastic sheeting and the sheeting will be folded over the export, taped closed, and covered with transport tarp.

Trucks will then be washed to remove any other material from the vehicle prior to backing out of the site. Water from the washing will be captured and processed for reuse or disposal.

Truck Drivers will not be allowed to exit the vehicle at any point while in the exclusion zone, windows shall remain closed. All prepping, loading, covering, and washing will be performed by personnel with HAZWOPER training in full exclusion zone personal protection equipment. As such, truck drivers will not be HAZWOPER trained.

NON-EXCLUSION ZONE PERSONNEL

Access to the non-exclusion zone will be limited to personnel who have taken Asbestos Awareness training, verified against the training list, and who are wearing the appropriate PPE.

NON-EXCLUSION ZONE VEHICULAR

Vehicular access will not be controlled in the non-exclusion zones, only that the operators are asbestos awareness trained, with the exception of ancillary work from suppliers, etc.

MATERIAL HANDLING

Concrete will be pumped into the exclusion zones. Pump trucks will be set up in non-exclusion zones or outside the work zone where the concrete truck will place concrete into the hopper from the chute. Hoses exposed to contamination will be sprayed off before swinging the boom outside the exclusion zone.

Reinforcing steel, formwork, etc will be placed into the exclusion zone via the haul truck washout area or a temporary opening in the fence. Equipment or personnel in the exclusion zone will perform the final placement.

Equipment and material deliveries will be allowed in the stabilized areas without exclusion zone controls.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EXCLUSION ZONE PPE

At a minimum, personnel will be wear Tyvek suits and breathing masks with 3M style filters, safety glasses, safety-toed boots, and hard hats. Personnel will adjust other PPE as required to safely perform the work in accordance with 29 CFR 1926.

NON-EXCLUSION ZONE PPE

At a minimum, personnel will be wear long, natural fiber pants, fire retardant shirts, safety glasses, steel toed boots, and hard hats. Personnel will adjust other PPE as required to safely perform the work in accordance with 29 CFR 1926.

INJURIES

LIFE THREATENING INJURIES

If a life threatening emergency occurs in the exclusion zone all work will be stopped and the site will be stabilized as possible. Emergency personnel will be allowed to access the site as required

to stabilize and transport the injured from the site. Reasonable efforts to contain and remove any contaminants leaving the site with the injured or emergency personnel will be taken.

Other Injuries

For all non-life threatening emergencies where the injured can be processed out either alone or with assistance the standard egress procedure will be followed.

Temporary Facilities

Sanitary Facilities

Exclusion Zone Sanitary Facilities

Sanitary facilities will be placed within the exclusion zone adjacent to the clean room. This facility will be used for urination only. Personnel will wash their hands prior to entering the facility.

Personnel will egress via the clean area and wash off any particulate before exiting the exclusion zone for defecation.

Sanitary facilities inside the work zone will be washed down prior to access by maintenance personnel. The maintenance personnel will access the sanitary facility via a temporary removal of control fence and remove the waste. The fence will be replaced and work will continue.

Non-Exclusion Zone Sanitary Facilities

Sanitary facilities will be placed around the site as needed to accommodate efficient work. Normal maintenance and access is anticipated.

Potable Water

Exclusion Zone Potable

Capped water will be transported into the clean room for personnel consumption. Personnel will shower their mask and head as well as wash their hands prior to consuming water in the exclusion zone.

Non-Exclusion Zone Potable Water

No special controls are required.

Communication

Contractor will communicate from the exclusion zone to the non-exclusions zone using two-way radios. Radios in the exclusion zone will be disposed of at the end of the work.

Closeout

Upon completion of the all work in the exclusion zone equipment will be washed on the haul road plates removing any contaminated material. When all material has been removed the equipment will be removed from the project.

Temporary facilities will be cleaned prior to finishing the project. This includes the sanitary facilities, clean room, etc. The exclusion zone delineation will become vague as the tear down occurs. The site will be stabilized except for the wash zone where the facilities will be located for

cleaning. After cleaning the plates will be cleaned and removed and the contaminated washout will be removed and disposed of at a permitted site.

The entire project will be stabilized at that time and no further controls will be needed as part of this work.

EXHIBIT 1

EXHIBIT 2

EXHIBIT 3